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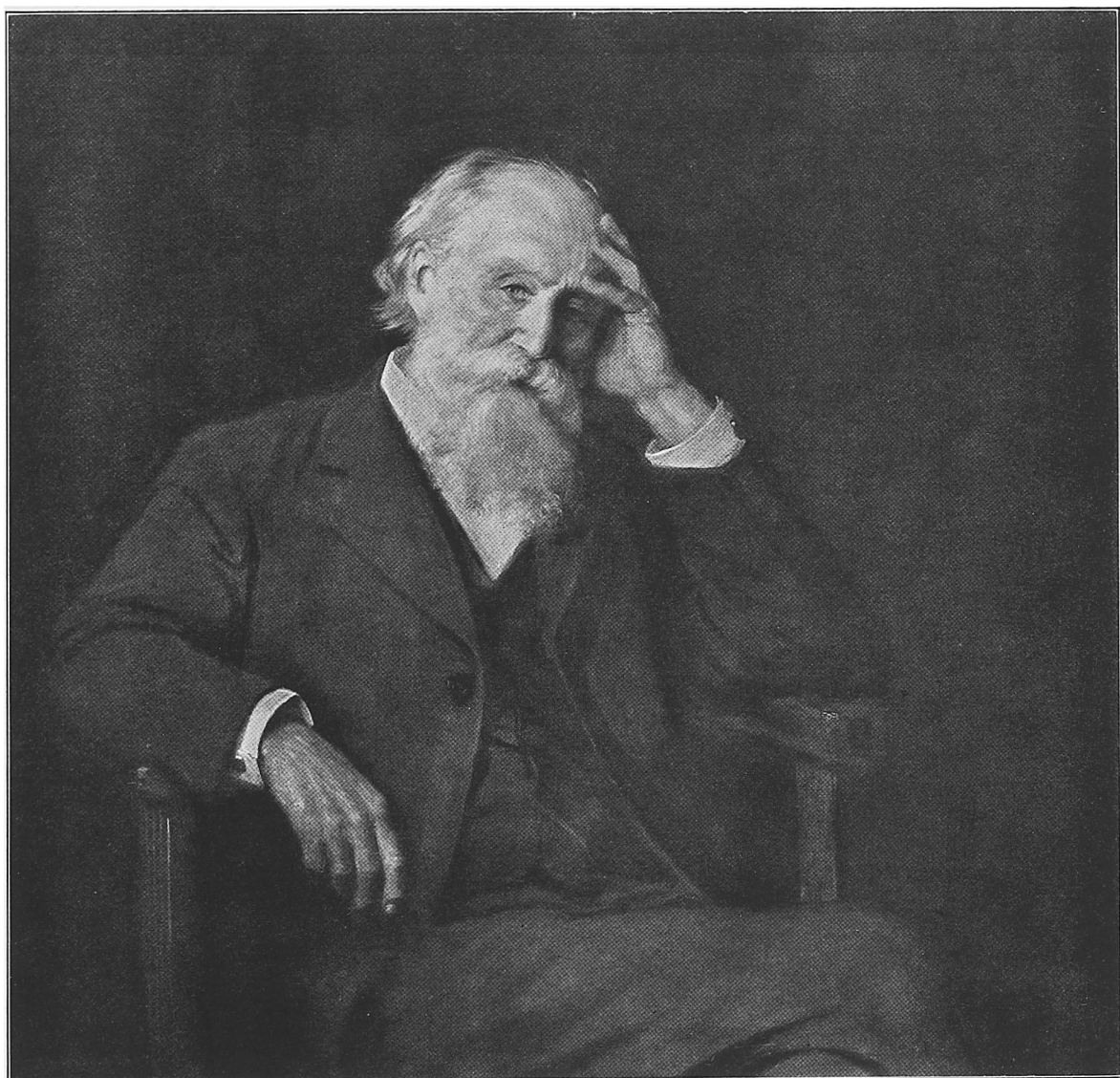
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JOHN BURROUGHS. FROM A PAINTING BY ORLANDO ROULAND

*See page 259*



MEDAL TO JOHN BURROUGHS, JOINT MEETING OF THE AMERICAN ACADEMY AND NATIONAL INSTITUTE OF ARTS AND LETTERS IN NOVEMBER

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# "NATURA IN MINIMIS EXISTAT"

By JOHN BURROUGHS

## I

THIS saying of Aristotle's is usually translated from the Greek as if it meant that Nature is seen only, or more fully, in "least," whereas it is more probable that Aristotle meant to say that Nature is as complete in the small as the great, that she is whole in all her parts—as much in evidence in the minute as in the gigantic, in the plant as in the oak, in the gnat as in the elephant, in the pond as in the sea. In the clay bank washed by rains, by the roadside, you may perceive the same sculpturing and modeling that you see in vast mountain chains. In California I have seen in a small mound of clay by the roadside, that had been exposed to the weather for a few years, a reproduction in miniature of the range of mountains that towered above it—the Sierra Madre.

A rivulet winding through a plain loops the same loops and ox-bows that the Mississippi makes traversing the prairie states. The physical laws at work are the same in both cases. Has not some poet said that the same law that shapes a teardrop shapes a planet? The little whirlwind that dances before you along the road in summer, and maybe snatches your hat from your head, is a miniature cyclone, and in our hemisphere it rotates in the same direction—in opposition to the hands of a clock.

Mere size does not count for much with Nature, she is all there, in the least as in the greatest. A drop of dew reveals the rainbow tints as well as the myriad drops of the summer shower, and the bow hovers in the spray of a small waterfall as surely as in that of Niagara. The thunderbolt leaps with no more speed across the black chasm of the clouded heavens, than does the electric spark in your laboratory leap across the tiny spaces from one pole to the other.

But the big-lettered and startling headlines in Nature's book occupy the real nature lover less than does the smaller print. The big and exceptional things all can see, but only the loving observers take note of the minor facts and incidents.

Emerson in his journal thinks it worth while to notice the jokes of Nature. He cites the Punch faces in the English violets, the parrots, the monkeys, the lapwing's limping, and the like petty stratagems of other birds. He might have cited the little green Tody of Jamaica, which is pretty sure to make one smile, or the murre of the Northern seas with their jew-like profiles and short legs. But of course Nature does not joke; it is man that jokes and experiences a sense of humor in certain of her forms, but all these forms have serious purposes. Inanimate things often behave in a way to excite one's risibles, but that end can be no part of the plan of Nature. When inanimate things act like human beings we laugh, and when human beings act like inanimate things we laugh; why we laugh it would not be easy to say.

Most animals certainly have a keen sense of play, but it is very doubtful if even so humanized an animal as the dog has any sense of humor. The grotesque is pretty sure to frighten him instead of amusing him. The sense of humor implies powers of ideation, which the lower animals do not possess.

The waltzing and saluting and other courtship antics of certain birds are very amusing to the human spectator, but it is all a very serious business with the birds. I always have to smile when I see a chipmunk come up out of his hole into which he has been hurrying his winter food supply, stand up straight on his hind legs, and quickly wash his face. How rapidly he passes his paws over that delicate nose and face, looking around the while to see if any danger is near! He does this at every trip. When we say on witnessing any act of an animal, "How cunning!" we feel, I suppose, a sense of its humanness; it suggests our own behavior under like conditions.

Last spring the vanishing of the deep snows from my lawn gave me a glimpse of the life and works of the meadow-mice in their winter freedom under the snow. At one place standing out very clearly was a long mouse highway, sunken into the turf and leading to a large dome-shaped nest of dry grass which it entered by a round hole on one side, and came out of a hole on the other; then it forked and became two highways leading off over the turf. It suggested a tiny railroad station with its converging lines. "How cunning!" exclaimed some school children and their teacher to whom I pointed it out. The mice had evidently enjoyed the privacy, freedom and safety there under the two feet of snow, as the record they left clearly showed.

I smiled one day last April when walking near the edge of a small pond, I saw a musk-rat on shore very busy stuffing his mouth with dry leaves, then take to the water holding his bedding well up till he came opposite to his hole in the bank, when he dived and swam to its under water entrance. My smile was provoked, I suppose, by the discrepancy between the care the animal took to secure dry leaves, and the necessity that compelled it to plunge under the wave in order to reach its chamber. I do not suppose the musk-rat could have interpreted my smile had he seen it and tried.

I was interested and amused by the behavior of the big garter snake I met in my field walk one October day. The day was chilly and I could not stir the snake into any considerable degree of activity. He was sluggish and made no effort to escape, though I teased him with my cane for a quarter of an hour. He presently woke up enough to scent danger in my cane. Probably he had a dim sense that it was another snake. He flattened himself out and became a half round, opened his mouth threateningly, but would not seize or strike my stick. He coiled beautifully and when I turned him on his back he righted himself quickly by a movement the whole length of his body. After a while I noticed that his body began to contract at a point about one-third the distance from the end of the tail; then, as I continued my teasing, he folded the lower part of his body back upon himself and twined it around the upper, like a vine doubling upon itself. If he was taking precautions against my stick as another snake trying to swallow him, it was good tactics; it would have made the problem of swallowing him much more difficult. I do not think it at all probable that the

snake had ever experienced such uncivil treatment before, and the emergency was met by the best resources the poor half benumbed creature had. "Swallow me, if you will, but I will stick in your throat if I can." I left him unharmed, doubled and twisted in self-defense.

Jokes in nature, no! but there are curious and amusing forms and incidents—grotesque shapes, preposterous color schemes and appendages, from our point of view, but all a serious part of the complex web of animal life.

The transparent trick of the ground-building birds to decoy you from their nests or young is very amusing, but the heart of the poor mother-bird is in her mouth.

The cock or mock nests of the house wren and marsh wren look like jokes; in fact the wrens themselves seem like jokes, they are so pert and fussy and attitudinizing, but whether these extra nests are sham nests—or whether they are the result of the overflowing measure of the breeding instinct, or decoy nests, serving a real purpose in concealing or protecting the real nest, is a question.

There are more tragedies in wild life than comedies, and fear is a much more active agent in development than joy or peace. The only two of our more common wild animals that I recall, in which the instinct or impulse of fear is low, are the porcupine and the skunk. Both are pretty effectively armed against their natural enemies and both are very slow, stupid animals.

When I stop to contemplate the ways of the wild creatures around me and the part they play in the all-the-year-round drama, my thoughts are pretty sure to rest for a while on the crow. From the wide distribution of the crow over the earth in some form, it would appear that Nature has him very much at heart. She has equipped him to make his way in widely diversified lands and climates. He thrives upon the shore and he thrives upon the mountains. He is not strictly a bird of prey, neither is he preyed upon. What is it in nature that he expresses? True, he expresses cunning, hardiness, sociability; but he is not alone in these things. Yet the crow is unique; he is a character, and at times one is almost persuaded that he has a vein of humor in him. Probably no country boy who has had a tame crow has any doubt about it. His mischief-making propensities are certainly evident enough. His soliloquies, his deliberate cat-calls and guttural sounds, his petty stealings, his teasing of other animals, his impudent curiosity, all stamp him as a bird full of the original Adam.

Country people are now much more friendly to the crow than they were in my boyhood. He is not so black as he was painted. The farmers have learned that he is their friend, for all his occasional corn-pulling and chicken-stealing. His is the one voice you are pretty sure to hear wherever your walk leads you. He is at home and about his own business. It is not his grace as a flyer that pleases us; he is heavy and commonplace on the wing—no airiness, no easy mastery as with the hawks; only when he walks is he graceful. The pedestrian crow! how much at home he looks upon the ground—an ebony clod-hopper, but in his bearing the lord of the soil. He always looks prosperous; he always looks contented; his voice is always reassuring. The farmer may be disgruntled and discouraged, his crows are not. The country is

good enough for them; they can meet their engagements; they do not borrow trouble; they have not lived on the credit of the future; their acres are not mortgaged. The crow is a type of the cheerful, successful countryman. He is not a bird of leisure; he is always busy, going somewhere, or policing the woods, or saluting his friends, or calling together the clans, or mobbing a hawk, or spying out new feeding-grounds, or taking stock of the old, or just cawing to keep in touch with his fellows. He is very sociable; he has many engagements, now to the woods, now to the fields, now to this valley, now to the next—a round of pleasure or duty all the day long. Not given to solitude and contemplation like the proud hawks, not pugnacious, never or rarely quarreling with his fellows, cheerfully sharing his last morsel with them, playing sentinel while they feed, suspicious, inquisitive, cunning, but never hiding; as open as the day in his manners, proclaiming his whereabouts at all hours of the day, looking upon you as the intruder and himself as the rightful occupant. The stiller the day the more noise he makes. He is never a sneaker, never has the air of a prowler. He is always in the public eye or ear. His color gives him away, his voice gives him away; on the earth or in the sky he is seen and heard afar. No creature wants his flesh, no lady wants his plume, though a more perfect and brilliant ebony cannot be found in nature. He is a bit of the night with the sheen of the stars in it, yet the open day is his province; publicity his passion. A spy, a policeman, a thief, a good fellow, a loyal friend, an alarmist, a socialist, all in one. Winter makes him gregarious, as it does many men; at night he seeks the populous rookery in the woods, by day he wanders in bands seeking food. In spring he establishes a crow network all over the country and is rarely out of ear-shot of some of his fellows. How we should miss him from the day! Among our community of birds he is the conspicuous, all-the-year-round feature. We do not love him, there is no poetry in his soul; but he challenges our attention, he is at home in the landscape, he is never disgruntled. Come rain, come shine, come heat, come snow, he is on his job and is always reassuring.

## II

The book of nature is always open winter and summer and is always within reach, and the print is legible if we have eyes to read it. But most persons are too preoccupied to have their attention arrested by it. Think of the amazing number of natural things and incidents that must come under the observations of the farmer, the miner, the hunter, that do not interest him, because they are aside from his main purpose. I see a farmer getting his cows every morning in the early dawn while the dew is on the grass and all nature is just waking up, and think that during the twenty or more years that he has been doing this, what interesting and significant incidents he must have witnessed in the lives of the wild creatures, if his mind had been alert to such happenings! But it was not. He noticed only his cows, or when his fences needed mending, or where a spring needed clearing out. What a harvest Thoreau would have gathered during that score or more of years! From ant to bumble bee, and from bumble bee to hawks and eagles, he would have

caught the significant things. Rarely can the farmer tell the poet or the naturalist anything he wants to know, because he has not the seeing eye, or the hearing ear. The fox hunter can tell you of the foxes he has killed or pursued, and just what it was that turned those that escaped him from their runway, but he can tell you little about the lesser game—what the mice and squirrels are doing, or the chickadees or wood-peckers are saying; his interests lie elsewhere. A Downy might be excavating his winter retreat in a dry stub or branch over his head, and he not know it. A chipmunk might be digging his hole in the field the farmer is plowing in September, and he none the wiser. The poet can say to the farmer:

One harvest from the field  
Homeward brought the oxen strong;  
A second crop thine acres yield  
Which I gather in a song.

And an Audubon or a Fabre would bring home an equal and a different harvest.

Our interest in nature is a reflection of our interest in ourselves—Nature is ourselves extended and seen externally. We experience a thrill of interest when we learn that the plants breathe and sleep as we do—that they have ingenious devices for disseminating their seed and for securing cross-fertilization; that there is competition among them and among the trees for the light and air and moisture and fertility of the soil; that they protect themselves against the sun and the cold, and against the wet. They all have their struggles and their enemies as we do, their youth, their maturity, their ripe old age.

How curious it is that the air plants should be able to get their mineral elements from the air as if this all but impalpable fluid were a soil full of lime and magnesia and silica, and the plant pushed invisible roots into it! In Florida how often I used to pause and regard them when I saw them growing upon gate-posts or dead tree-trunks and flourishing so luxuriantly! I burned some of them up to see if they left any ashes and was surprised at the amount. Is this semi-tropical air, then, so loaded with all these mineral elements? How much I wished to see the mechanical or chemical devices by which the plants seized it or strained it out of the air! A Russian chemist says that "if a linen surface moistened with an acid be placed in perfectly pure air, then the washings are found to contain sodium, calcium, iron, potassium. Linen moistened with an alkali absorbs carbonic, sulphuric, phosphoric and hydrochloric acids." The presence of organic substances in the air can be proved by similar experiments. The cosmic dust in the air from the wear and tear of the vast sidereal machinery, not detectable by any of our human senses, may also be a source of some of the mineral elements in the air plants. It is evidently by the aid of the acids in the leaf that these plants trap and appropriate the iron, the potassium, etc. The atmosphere, then, seems like another and finer earth possessing nearly all the mineral and gaseous and living organisms—a finer world superimposed upon the world in which we live. It is the watery vapor in the air, as it is the liquid water in the earth that holds in infinite division the various earth salts upon which the plants feed. An

air plant, and an earth plant, then, do not differ so fundamentally as would at first seem—the former has its roots in the air and draws about the same elements thence that the latter does through its roots in the earth.

Is not distilled and evaporated water supposed to be absolutely free from mineral elements? How then do all these minerals get into the air, if not through the vapors that rise from the sea and the land? It is curious, if true, as is alleged, that stagnant water anywhere near air plants seems to be injurious to them. They need the purest air.

Wait long enough and Nature will always have a fresh surprise for you. I have seen in my life only one big maple tree utterly destroyed and reduced to kindling wood by a thunderbolt. I have never yet known lightning to strike a beech tree, but probably if I wait long enough I shall see it or hear of it. I have only once in my life found a plant called the whorled pogonia, and only once found a plant called the Devil's bit, but in time I hope to find another of each. I have only once seen a wild bird turning over her eggs in her nest as does a hen. I have never but once seen the Golden Eagle soaring above my native hills and that was seventy years ago. No wild animal of the cat tribe other than the ordinary wild cat had been seen or heard in my native town in the Catskills in my time, till a few years ago, when a new cry was heard. Let me tell about it:

One still moonlight October night, as I was sleeping on the porch, a bit of natural history on four legs which I had never heard before, let out such a cry and wail under the hill within a stone's throw below me, that I was startled and puzzled beyond measure. I thought I knew the natural history of the Catskills pretty well, but here was a cry absolutely new to me. There was first a loud, strident, murderous scream, such as a boy might utter when utterly beside himself with fear or pain, followed by a long tapering moan and wail, like the plaint of a lost soul. It was almost blood-curdling. Five times, with less than half a minute interval, the creature or lost spirit rent the midnight silence with this cry, followed by the wail of utterly hopeless despair. I raised myself up on my elbow and listened. Each scream echoed off in the woods a few hundred yards away, but the moan faded away in the moonlight and became a mere wraith of sound. I could not help visualizing it, and see it mount up toward the moon and become fairly blue and transparent in its beams. I was partially disabled from the kick of a horse around whom I had become too coltish in the field the day before, and could not get up and run to the brink of the hill, below which the creature seemed to be. What could it be?

The next night it came again at about the same hour, but I was sleeping too soundly to be awakened. A young couple from Kansas were sleeping in separate beds in the chamber above me; they heard it and the wife was so scared that she got up and crept in the bed beside her husband, when her fear was communicated to him and neither of them slept any more till morning. The next night we all lay awake listening till after midnight, but the performance was not repeated. Not long after I visited the Zoological Park at the Bronx and described the sound I had heard to the Director. "A puma" he said, "probably one escaped from captiv-



ity and calling for her mate." The Director had heard them cry hundreds of times and he repeated the cry. "Was it like that?" "Not a bit" I said. "No human voice could give the scream I heard, or imitate the hopelessness of that wail." The only sound that I had ever heard that was at all like the cry, was uttered by a young man whom I caught one night stealing my grapes. I suddenly rose up amid the vines, draped in black, and seized him by the leg as he was trying, half paralyzed with fear, to get over the wall. He gave forth a wild desperate-animal scream, as if he had found himself in the clutches of a veritable black fiend. Only the wild animal which slumbers in each of us, and which fear can at times so suddenly awaken, was vocal in that cry. As for the utterly forlorn and heart-breaking crescendo of the midnight wail I heard from my sleeping-porch, I have never heard anything approaching it from man or beast.

There were traditions in the neighborhood of some such mysterious cry having been heard here and there for the past seven or eight years, frightening horses at night, causing them to tremble and snort and stop in the road, and almost paralyzing with fear a young fellow and his girl crossing from one valley to another on their way home from a country dance.

Six years ago, on a warm July night, a woman friend of mine and her son, of sixteen or eighteen, were passing the night in hammocks in my orchard, when near midnight they came hurrying to the house in a great state of agitation; they had heard

a terrible blood-curdling cry. I laughed at them as city tenderfeet, told them they had probably heard the squall of a fox, or the cry of an owl, or a coon. They did not care what it was, but they would not return to their hammocks, or even try to pass another night there. They have since told me that the fearful cry they heard was like the one I described.

An old woodsman and hunter has told me that I heard the cry of the Canada lynx. And he is probably correct, though I can find no record in the books that the lynx has such a cry. In the winter of 1915 a similar cry was heard late at night on the hills above the village. It set all the dogs in town barking and people thrust their heads out of their doors and windows to see or hear what had caused the sudden rumpus. The following September, while a young man whom I know was plowing in a hill field near the woods, a large, yellow, cat-like animal came down and lingered near him. His description of it, and the fact that it had a short tail, convinced me that he had seen a lynx, and that this was our mysterious night-screamer. The young farmer ran to the house to get his gun, but when he returned he saw the big cat disappearing in the woods. Yet no one has seen its track upon the snow, and no poultry or lambs or pigs or calves in the neighborhood have been killed by it.

One never expects to exhaust the natural history of even his own farm. Every year sees a new and enlarged edition of the book of nature, and we may never hope to turn the final leaf.

*John Burroughs*

## DREAMS

Since Eden's moonrising come they as either the  
Guests or the ghosts of men's sleep,  
Though wrinkled soothsayers warn us that neither  
the

One name nor other they keep;  
Children of mystery,  
Fiction or history,  
Dreams flourish best where the shadows are deep.

Strange are they never until they are gone for us,  
Jangled, yet not out of tune,  
Thrilling us as if at twilight should dawn for us  
Some other side of the moon.

No man their master is  
And our disaster is  
Waking, and marring their magic so soon.

Could we once win to the place of their tarrying,  
Mystical, hidden, unknown,  
Suddenly come on them red-handed harrying  
Dingles of Slumberland's zone,  
Could but our wearying,  
Questing and querying  
Find them and bind them, 'twere worth a king's  
throne.

None the less pray we in vain for their finishing—  
Who knows the end of a stream?  
And though their phantom floods flow on unminishing  
With their wild glories a-gleam,  
Still with the morn again  
Are we forlorn again—  
Night's done, and Life's done, but never the dream.

*William Hervey Woods*

